Abstract

The invention relates to an apparatus for mixing, drying and coating pulverulent, granular or shaped loose material in a fluidized bed, in particular for use in a process for producing supported catalysts for gas-phase oxidations, which comprises a container (10) for accommodating the loose material, with a bowl-like depression (17) being provided in a lower region (13) of the container (10), a central tube (27) for introducing a gas, with the central tube entering the container in an upper region (12) of the container (10), extending essentially axially downward in the container (10) and opening into the depression (17), an essentially annular deflection shield (29) which is fixed to the central tube (27) in the upper region (12) of the container (10), a guide ring (31) which is located in the lower region (13) of the container (10) and surrounds the central tube (27) essentially concentrically at a distance (L) for part of its length so that a first opening (34) is formed between the wall of the container (10) at the upper edge (22) of the depression and the lower end (33) of the guide ring (31) and a second opening (36) is formed between the deflection shield (29) and the upper edge (35) of the guide ring (31), and means, for example valves (21), for introducing a fluid into the container (10). In the apparatus of the present invention, the outer wall of the central tube (27) is at least partly provided with an adhesion-reducing coating (38). In a preferred embodiment, the distance (L) between the wall of the central tube (27) and the wall of the guide ring (27) is greater than the open height (H3) of the first opening (34). The invention also provides a process for producing supported catalysts using such an apparatus.